

THE COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS

DEPARTMENT OF ENVIRONMENTAL PROTECTION

ONE WINTER STREET, BOSTON, MA



Request for Information and Expressions of Interest (RFI)

Enhancing Resilience and Emergency Preparedness of Water Utilities through Improved Mapping

October 16, 2018

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1. INTRODUCTION AND PURPOSE

1.1 Description

The Commonwealth of Massachusetts Department of Environmental Protection (MassDEP) is soliciting information and expressions of interest from Public Water Suppliers (PWSs) and Publicly Owned Treatment Works (POTWs) to receive free technical assistance in developing and enhancing Geographic Information System (GIS) maps of their drinking water distribution or sewer collection systems. The assistance will be provided by a private consulting firm which has not yet been selected. The goal of this effort is to ensure that all public water suppliers and publicly owned treatment works have accurate maps of their respective systems in order to enhance asset management, improve system operations, and plan for and respond to emergencies. Specifically, GIS mapping provides the tools to better organize assets and events, including the ability to perform data analysis that can assist with routine maintenance, level of service information, replacement costs, and risk analysis. MassDEP's Water Utility Resilience Program (WURP) is committed to assisting water utilities with achieving this goal through a technical assistance program that provides a uniform approach to GIS data developed for the water sector.

The purpose of this RFI is to identify and collect system information from water utilities interested and ready to receive GIS mapping services. Based on the responses to this Request for Information and Expressions of Interest (RFI), a list of PWSs and POTWs interested and ready for the GIS mapping assistance will be created. The list is expected to be used by a consultant (to be selected later) to focus mapping work in communities that have expressed interest in proceeding with GIS mapping, and are ready to provide the necessary system information and staff review time to accomplish the program goals and create final GIS products. Responding to this RFI is entirely voluntary and will not guarantee that a water utility will be selected to receive technical mapping assistance. This RFI is not a contract and is not an award of funding or technical assistance.

MassDEP expects to select a consultant to provide the mapping assistance through a Request for Quotes (RFQ) later this year. The purpose of that RFQ will be to select the consulting firm that will conduct the GIS mapping services for interested water utilities. A final list of PWSs and POTWs ready and interested in receiving GIS mapping services will not be available until after a consulting firm is selected by MassDEP (time, funding, complexity and size of systems may constrain the number of systems that can be mapped).

1.2 Background

In 2016, a collaborative effort between the MassDEP WURP and the MassDEP Geographic Information Systems (GIS) program resulted in a preliminary statewide inventory of available PWS and POTW system mapping information. The inventory process was followed by development of a prioritized municipality/system listing, which identified PWSs and POTWs that may be in need of technical assistance for GIS mapping of their respective systems.

In the spring of 2017, \$300,000 was used by MassDEP, through its contractor Tighe & Bond, Inc., to provide direct technical assistance to thirty two (32) communities across the state that resulted in developing consistently mapped datalayers for thirty four (34) PWSs and fifteen (15) POTWs. The 49 water utilities chosen for this technical assistance during fiscal year 2017 (FY17) were prioritized based upon factors that included system size, need(s) and interest in participation, and MassDEP regional program staff input.

During fiscal year 2018 (FY18), an additional \$500,000 was made available to further the project. MassDEP issued an RFI on November 7, 2017 to solicit interest from additional PWSs and POTWs to receive free technical assistance in developing GIS maps of their respective distribution and/or collection systems from a private consulting firm. The RFI was posted to the MassDEP website with additional direct email messages sent out through MassDEP's drinking water and wastewater/Department of Public Works (DPW) listserv. On February 20, 2018 MassDEP issued an RFQ through CommBuys to hire a consultant to provide the mapping services, and a contract was finalized to provide:

- GIS technical assistance for up to 40 water utilities;
- quality control review of over 400 water utility service area maps with revisions as appropriate;
- investigation of map status for approximately 100 communities and development of water utility service area maps subject to community response; and
- a field use information report that offers opportunities for water utilities to access and enhance their systems' GIS data in real time.

All participating systems receive direct GIS mapping technical assistance, a hard copy paper map of their system, along with a thumb drive that contains the pdf image of their map, the GIS datalayers, and a GIS metadata description report that identifies the source(s) used for developing the GIS map, the features included in the dataset, and the QA/QC process.

MassDEP will use the developed data to improve internal access to water sector infrastructure information, which aids in identifying system vulnerabilities in relation to climate change adaptation planning and improving emergency preparedness and response capabilities. All detailed data developed for this critical infrastructure sector is protected by state and federal laws, including an exclusion from public disclosure pursuant to M.G.L. c. 4 §7, Clause 26(n), the Critical Infrastructure Information Act of 2002 (see 6 C.F.R. Part 29), and/or Chemical Vulnerability Terrorism Information (see 6 C.F. R. 27.400 ff). However, data development also allows for the production of generalized service area mapping, which provides simple polygons within a community to illustrate areas that have water or sewer service. This generalized service area mapping is being developed for all communities within the Commonwealth as part of the FY18 project, and allows for the sharing of basic service area information with the public and other state agencies without releasing detailed, critical infrastructure information. In addition, all service area mapping is made available to the systems or applicable communities as they are developed.

1.3 Expressions of Interest from Water Utilities

Entities that may express interest in participation include small, medium and large sized Community (COM) PWSs and POTWs, including municipal sewer systems. Non-transient non-community (NTNC) and transient non-community (TNC) PWSs will also be considered under this project, particularly those that serve other critical infrastructure sectors, or as shelters during emergency situations. Systems that have participated in previous mapping rounds and clearly identify additional needs to enhance their GIS dataset may also express interest in participating in this project.

2 ESTIMATED CALENDAR

EVENT	DATE
RFI Release Date	October 16, 2018
RFI Close Date	November 16, 2018

MassDEP expects to issue a Request for Quotes and select a qualified contractor to provide the mapping services after this RFI is closed. Mapping services are expected to be provided in the first half of 2019.

3 DATA NEEDS

In order to receive mapping assistance, interested water utilities must be prepared to work directly with the selected contractor by March 1, 2019. Selected water utilities must be available to meet with the selected contractor to provide existing data for their respective system, which may include, but is not limited to the following:

- Record plans and/or system maps in paper or digital (PDF, TIFF, JPEG, CAD etc...) format(s) that depict:
 - Pipes
 - Valves
 - Manholes
 - Interconnections
 - Hydrants
 - Booster stations
 - Pump houses
 - Storage tanks
 - Treatment facilities
- Information on pipe material, size and installation dates if known,
- Any previously developed digital and/or GIS data in need of revision or update, and
- Other operational or asset information the system prefers be included in mapping.

Water utilities must be available to review a draft version of the GIS map developed by the contractor, and provide any necessary corrections to the contractor within one to three weeks after receipt of the draft materials. The estimated time for a water utility to spend gathering applicable information and meeting with the contractor is heavily dependent upon the system size, and organization and availability of map material. System staff should anticipate spending up to 90 hours on this project.

4 REVIEW OF RESPONSES FOR INTEREST AND READINESS

Interested water utilities that would like to participate in this project should submit a response to this RFI. The responses will be used to identify interested water utilities that are ready to proceed with a mapping project, and will assist in determining the specific GIS needs of interested systems that may receive GIS technical assistance from the consulting firm hired by MassDEP.

4.1 RFI Responses and Readiness Assessment

MassDEP WURP and GIS program staff will review all RFI responses from interested PWSs and POTWs with input from MassDEP regional program staff. Responses to this RFI will be reviewed for the following components (at a minimum) which indicate system readiness to proceed:

- Status of mapping information currently available to the water utility.
- Ability of the water utility staff to provide the necessary information to develop GIS datalayers for their system.
- Commitment made by the water utility to actively participate in the initial meeting request by the selected contractor.
- Commitment made by the water utility to review and provide comment on the draft GIS map developed within established timeframes.

4.2 Response Format

Responses shall be limited to 2 pages (8-1/2" by 11" sheet with 0.5" margins, 11 size font minimum) and shall include the following:

1. A short statement explaining how the system will benefit from participating in the GIS infrastructure mapping project, and how the provided map and data will be used to enhance the system.
2. A description of the utility's distribution and/or collection system, including, but not limited to the number(s) of treatment plants, pumping stations, manholes, hydrants, valves, service connections, and miles of pipe as applicable and to the best of your knowledge.
3. A description or listing of the system's current map and data availability, format(s), status, and revisions needed to improve current map(s).
4. A detailed description of any record scanning needs that may be used in conjunction with the GIS mapping (e.g., number of tie-cards on file intended for linking to GIS point data).
5. Identification of any in-house mapping capabilities, and description of any online GIS data viewers in use by the municipality in which the system is located.
6. A detailed description of any operational events (e.g., history of breaks, water quality complaints etc.) and additional asset locations (e.g., back-up power/generators, portable generator plugs etc.) the system prefers to add as additional GIS datalayers.
7. A statement confirming that the system is willing to make a commitment to provide up to 90 hours of staff time to gather information and work with a consulting firm to complete a map for the system.
8. A statement confirming that the system is willing to make a commitment to work with a consulting firm to complete the GIS mapping by June 30, 2019.
9. A contact list including contacts' email, telephone numbers, and mailing address (i.e., mailing address that maps would be delivered to).

5 HOW TO SUBMIT A PAPER OR ELECTRONIC RESPONSE

Responding utilities may submit their response either on paper or electronically.

PAPER SUBMITTAL INSTRUCTIONS:

Submit your **PAPER** response in a sealed envelope that is clearly marked with the words “WURP-GIS Infrastructure – 2019”, by THE RESPONSE DEADLINE OF NOVEMBER 16, 2018, to the following address:

Massachusetts Department of Environmental Protection
8 New Bond Street, Worcester, MA 01606
ATTN: Kristin Divris

Paper responses must be submitted in a sealed envelope and include **one (1)** original signed copy, and **one (1)** duplicate copy.

ELECTRONIC SUBMITTAL INSTRUCTIONS:

Submit your **ELECTRONIC** response with the words “WURP-GIS Infrastructure – 2019-SystemName” in the subject line, by THE RESPONSE DEADLINE OF NOVEMBER 16, 2018, to the following Email:

E-Mail: Kristin.Divris@mass.gov

Questions may be directed to Kristin Divris at Kristin.Divris@mass.gov or by telephone at 508-849-4028.

RESPONSE DEADLINE – Responses are due no later than **November 16, 2018 at 5 pm.**

LATE RESPONSES WILL NOT BE CONSIDERED.